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CONCEPTUALIZATIONS OF POPULARITY IN EMERGING ADULTHOOD

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DEPARTMENT OF PSYCHOLOGY

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This is dedicated to my team. You all know who you are.

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Abstract

Peer status in children and adolescents has been well-studied. Conversely, how this construct presents in emerging adulthood has received little attention. The current study investigated the conceptualization of popularity in adulthood, as well as the self-reported behavioral profiles of popular and unpopular individuals. Participants were 254 college undergraduates aged 17 through 23 who were recruited from a large university in a small Midwestern city. They completed self-report measures of peer status, as well as measures of their social dominance orientation, relational aggression, physical aggression, and prosociality. Overall, self-reported popularity was significantly, positively correlated with social acceptance, visibility, prosociality, and alcohol use. A separate group of 219 participants aged 18 to 25 generated responses to open-ended questions of what it means to be a popular/unpopular girl/guy in college. Both popular females and males were described most positively for their physical appearance, peer interactions, competencies, and prosocial behavior. Unpopular females were described most negatively for their physical appearance and peer interactions, while unpopular males were described most negatively for their peer interactions and competencies. How these findings compare to research on adolescents was discussed.

Chapter 1: Introduction

Emerging adulthood is a time of identity exploration, which often happens in a new setting, while surrounded by new people (Arnett, 2004). In 2015, over 69% of students enrolling in college, did so immediately following high school (National Center for Education Statistics, n.d.). How individuals relate and interact with each other during this developmental period, particularly in a university setting, is of great importance because it has implications for emotional adjustment, academic success, and college retention (e.g., Bean, 1985; Fass & Tubman, 2002; Lapsley & Edgerton, 2002; Swenson, Nordstrom, & Hiester, 2008). The current study aims to understand the correlates of peer status, particularly popularity, in a population of individuals navigating emerging adulthood and undergraduate studies.

Peer Status

There is a long history of studying social acceptance, which measures peer status in terms of likeability (LaFontana & Cillessen, 2002). Social acceptance typically refers to those children that are well-liked or preferable friend choices (Parkhurst & Hopmeyer, 1998). Much of early research on "popularity" actually assessed social acceptance, but researchers have recently placed a greater focus on understanding a more power-based form of status, known as perceived popularity. Here, individuals identify peers that they consider "popular" or "unpopular" (LaFontana & Cillessen, 2002). This typically yields nominations based on reputation as opposed to personal preference. Though popularity and social acceptance are generally found to be moderately correlated, they differ in several key areas (Cillessen, 2011). Social acceptance is less stable than popularity (Cillessen & Borch, 2006); popular individuals

are more influential over their peers than are likeable youth (Lease, Kennedy, & Axelrod, 2002); and social acceptance has been linked to more positive adjustment, whereas popularity is associated with both positive and negative behaviors (Mayeux, Houser, & Dyches, 2011). The current study aims to understand more about popularity, and in particular, how popularity in emerging adulthood differs from that of popularity in adolescence, when the social context changes from high school to college.

While there is a wealth of literature examining children and adolescents' peer status, we know little about this construct for emerging adulthood. This is a time characterized by shifts from adolescent developmental goals of academic success, friendship, and behavior to emerging adulthood goals of romantic relationships and careers (Lansu & Cillessen, 2012; Roisman, Masten, Coatsworth, & Tellegen, 2004), so it is worth investigating if the status and power structures previously used to reach those adolescent goals shift, as well. Many people in this particular phase of their life, when asked, do not feel that they are adolescents *or* adults (Arnett, 2000). It is a time marked by identity exploration in the areas of worldviews, love, and work. Further, this exploration often happens in a new social "ecology." The social network is much larger, which means learning to navigate more peers and personalities. Further, a larger peer system results in a less personal environment and fewer connections with close others. This is at odds with Erikson's theory of psychosocial development, which suggests that in the early 20s, forming close relationships is a crucial developmental task (Erikson, 1963). Therefore, it is reasonable to suspect that peer relationships might evolve to reflect these changing structures and goals.

Methods of Studying Peer Status

Sociometry is a technique used to measure peer status through the use of nominations of peers that are liked most and liked least (Rubin, Bukowski, & Parker, 2006). A great deal of the research with sociometry aims to assess social acceptance (sometimes referred to as *sociometric popularity*) and rejection (disliking). These measures are not on opposite ends of a spectrum, though they may seem like it. Asking individuals to nominate peers that they like and dislike, researchers were able to determine that individuals can be high on both, low on both, high on one and low on the other, or be average on both. In addition to assessing general likeableness, or preference, this scale allows for the assessment of visibility in the peer group, which is evidenced by how many nominations children receive. *Socially accepted* individuals are low in rejection and high in acceptance. *Rejected* individuals are low in acceptance and high in rejection. *Average* individuals receive an average number of nominations of rejection and acceptance. *Neglecte*d individuals receive few nominations for both acceptance and rejection. *Controversial* individuals receive many nominations for both rejection and acceptance (the group most closely associated with popular individuals; Parkhurst & Hopmeyer, 1998). Socially accepted, neglected, and controversial statuses each have their own behavioral and psychological correlates.

This nomination technique has been used to further distinguish popularity from social acceptance, or sociometric popularity, by having individuals also nominate age-mates that are "most popular" and "least popular" (Parkhurst & Hopmeyer, 1998; LaFontana & Cillessen, 1998, 2002; Rubin et al., 2006). As Rubin and colleagues (2006) highlight, the distinction lies in that social acceptance, or liking, is a dyadic

experience, whereas popularity reflects group perceptions. Prior research found correlations between the constructs for adolescents to be only .40 (Parkhurst & Hopmeyer, 1998).

Social Network Analysis (SNA; Richards, 1995; Rubin et al., 2006) is a technique used to distinguish peer networks through the use of friendship nominations. By participants listing who their friends are, researchers are able to determine *group members*, belonging to exclusive peer groups of three or more individuals, *liaisons*, who are not group members themselves, but have friends that are group members, *dyads*, who have one mutual friendship and do not belong to groups, and *isolates*, who have no reciprocated relationships. Because of the method of nominations, SNA is considered a friendship network.

Social Cognitive Map (SCM; Cairns, Gariepy, & Kindermann, 1989 in Rubin et al., 2006) is a technique used to examine peer networks by asking participants to map out the people, including themselves, who hang out together. From this information, researchers are able to determine group size, how groups relate to each other within the broader peer group, how many links there are within the group, and psychological correlates of the group (e.g., importance of academic performance).

Teacher-based assessments of peer status have also been conducted (Parker & Asher, 1987), however they may not be as reliable of a source as peer-reports. Teachers can be influenced by a number of things, including the individual's academic success, gender, or social class. Further, teachers and peers often have different opinions of what is considered appropriate and inappropriate behaviors (White & Kistner, 1992). Teachers are unable to witness all aspects of peer interactions and may miss important

events used for judging levels of acceptance. For example, individuals are likely on their best behavior in front of teachers to avoid the negative consequences of disruptive behavior, which might prevent the teacher from seeing the full extent of aggressive behaviors. There does seem to be some moderate agreement between teacher- and peer-reports concerning peer acceptance (correlations ranging from .40 to .60; Parker & Asher, 1987).

Self-reports of peer status, though not often used, can also be a source of popularity ratings (Luthar, Shoum, & Brown, 2006). For example, one potential measurement tool, The Piers-Harris Children's Self-Concept Scale 2 (Piers, Herzberg, & Harris, 2002), assesses popularity through items about ability to make friends, popularity, and inclusion in activities. While self-reports are not generally considered best practices for this type of data (Cillessen & Marks, 2011), this may be the most accessible method for large environments in which it may be difficult to establish reference groups, such as a university.

Another method for assessing peer status is using a prototype approach (LaFontana & Cillessen, 2002). This method asks participants to describe members of a category, as opposed to nominating peers to fit a category. This allows for the examination of perceiver effects of constructs, such as popularity and unpopularity. Investigating the positive and negative qualities that individuals associate with popularity allows researchers to better understand schemas and perceptions of popularity as opposed to limiting options by providing a predetermined set of behavioral correlates. Further, the prototype approach may reveal different aspects of popularity than a nomination measure would. For example, when asked the question of

what makes someone popular, individuals may not think to respond that they exclude others, but may perceive something else as a greater indication of popularity.

Popularity in Adolescence

Research with older children and adolescents has indicated that popular individuals are seen as athletic, talented, wealthy, physically attractive, leaders, competent, self-confident, highly socially connected, winners of disputes, and happier than unpopular peers (Holder & Coleman, 2008; LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998; Sandstrom & Cillessen, 2006). They are also higher in physical and relational aggression (i.e., controlling and damaging peer relationships; Crick & Grotpeter, 1995) than socially accepted children (e.g., Mayeux et al., 2011). Further, research suggests that aggressive behaviors increase after attaining popularity (Cillessen & Mayeux, 2004). A growing body of research suggests that popular children and teens effectively combine the use of both prosocial behaviors (such as cooperation and leadership) and aggressive behaviors to get their way with peers (Hawley, 2003; Puckett, Aikins, & Cillessen, 2008), thus earning descriptions of both social adeptness and manipulation (Sandstrom & Cillessen, 2006). Popular adolescents are socially powerful, and are thus characterized by their social impact, or *visibility*, as opposed to their likability (LaFontana & Cillessen, 2002). It should be noted, however, that some popular adolescents are considered very well accepted, or *prosocial-popular,* and are typically viewed much more positively by peers (de Bruyn & Cillessen, 2006).

Conversely, unpopular adolescents are viewed as socially isolated, unattractive, and lacking in talents (LaFontana & Cillessen, 2002). Unpopular students often have negative interactions with their peers due to victimization by others (Schwartz, 2000).

Low status adolescents have been linked with poorer outcomes, such as greater absenteeism and dropout rates (DeRosier, Kupersmidt, & Patterson, 1994; Ollendick, Weist, Borden, & Greene, 1992). They are also seen as being high on relational (Walcott, Upton, Bolen, & Brown, 2008) and physical aggression (Gorman, Schwartz, Nakamato, & Mayeux, 2011). Because of this parallel with popular individuals, researchers have been working to identify moderating variables to better distinguish the associations between popularity and aggression. For example, popularity is more strongly correlated with relational aggression as children get older (Cillessen & Borch, 2006; Rose, et al., 2004); popular girls are seen as more relationally aggressive than popular boys (Cillessen & Rose, 2005); popular girls endorsing more social dominance orientation items (i.e., a preference for group hierarchies over equality; Pratto, Sidanius, Stallworth, & Malle, 1994) were seen as more relationally aggressive (Mayeux, 2014). Other moderating variables for relational aggression include prosociality, prioritizing popularity as a social goal, social self-perceptions, and appearance (e.g., Cillessen, Mayeux, de Bruyn, & LaFontana, 2011; Li & Wright, 2013; Mayeux & Cillessen, 2008; and Puckett et al., 2008; Vaillancourt & Hymel, 2006).

Research also suggests adolescents engage in substance use (e.g., alcohol, cigarettes, etc.) to attain and maintain popularity (e.g., Mayeux, Sandstrom, & Cillessen, 2008; Plumridge, Fitzgerald, & Abel, 2002; Prinstein & Cillessen, 2003; Prinstein, Meade, & Cohen, 2003). Participating in these risky health behaviors has been related to peer status in various studies (e.g., Alexander, Piazza, Mekos, & Valente, 2001; Bot, Engels, Knibbe, & Meeus, 2007). For instance, Killeya-Jones and colleagues (2007) found beginning-of-school-year substance use associated with higher

peer status amongst 7th grade students, regardless of level of later substance use. For alcohol use, the association with peer status has been found to depend on group norms, such that drinking above peer means could result in social rejection (Balsa, Homer, French, & Norton, 2011; Becker & Luthar, 2007; Prinstein et al., 2003).

Popularity in Adulthood

Few studies have investigated popularity in adulthood. However, the desire for social success perseverates throughout life (Scott & Judge, 2009), suggesting that popularity is worth studying in older populations. However, the transition from the structured settings of high school to the much less controlled college and work environments limits researchers' abilities to understand peer structures in adulthood. An early attempt to understand "popularity" in college ultimately assessed social acceptance in girls by asking for nominations of such things as peers students would like to spend free time with, room with, and eat meals (Reilly & Robinson, 1947). Predictive variables were gathered from entrance records and yielded little significance. Only age at which students entered college and status of parental loss were significantly related to popularity, such that younger freshmen were more accepted (likely because they began college straight after high school, so they had more friends starting at the same time) and students who lost one or both parents were much more unpopular (likely because they had to work and were less able to socialize).

One study examined social acceptance and popularity in a college sample that closely mirrored the structure of many high schools, such that the majority of students' time is spent in classroom settings with the same peers, which results in students being quite familiar with one another (Lansu & Cillessen, 2012). Using a sociometric

instrument, students nominated their peers for such categories as liked most, liked least, most popular, least popular, leadership abilities, attractiveness, exclusion, prosociality, and aggression. Consistent with child and adolescent findings, popularity and social acceptance were only moderately related at .52, suggesting that these are still two distinct constructs in emerging adulthood. Popularity was positively related to attractiveness, respect, success, dominant leadership (power, centrality, attention-holding, and fitting in), and relational aggression, which is consistent with the literature on adolescents.

Using a social network analysis, Phua (2011) examined popularity and its influences on smoking and alcohol use in a fraternity setting. Freshmen members were asked about their smoking and drinking habits and identified other members in the fraternity in which they regularly hung out with, used for social support, and trusted. They were again asked about their smoking and drinking during their senior year. As members' popularity increased, as determined by the number of nominations he had, their likelihood for smoking or drinking heavily increased. This seems to be a function of popular members conforming to norms within the peer group as conforming mediates the relationships between popularity and drinking, and popularity and smoking. This demonstrates that popular students set trends, but also model what they perceive as socially accepted behaviors (Alexander et al., 2001; Phua, 2011; Hoffman, Monge, Chou, & Valente, 2007).

Shim and Ryan (2012) assessed popularity within a dorm setting through the use of Resident Advisor ratings of social adjustment, a method that most closely mirrors the use of teacher-ratings of status for younger populations. In the first week of students'

Fall semester, researchers assessed participants' self-esteem and social achievement goals. In the first week of the Spring semester, Resident Advisors rated participants' popularity, as well as their social competence and adjustment. Ultimately, social demonstration-approach goals (gaining popularity and receiving positive feedback from peers) were positively associated with popularity, while social demonstration-avoid goals (avoiding negative feedback) were negatively associated with popularity.

Scott and Judge (2009) attempted to understand popularity and the influences it has in the work setting based on the premise that certain correlates of peer status "such as receiving help from others, being victimized, withdrawing, being absent, and dropping out of school have workplace equivalents: organizational citizenship behavior (Smith, Organ, & Near, 1983), counterproductive work behavior (Sackett & DeVore, 2002), job withdrawal, absenteeism, and turnover, respectively" (p.20). In the first study, the researchers had a group of undergraduate students that worked at least part time complete surveys of how often they received organizational citizenship behaviors (OCBs; like helping and being courteous) and counterproductive work behaviors (CWBs; like rudeness and avoidance) from their coworkers. Further, participants identified two of their coworkers to complete surveys about them assessing their popularity and liking. Popularity was significantly positively associated with liking, though they were still distinctly separate constructs. Popularity was also associated with greater receipt of OCBs and lower receipt of CWBs from colleagues. The second study attempted to replicate findings with a population of full-time employees that engaged in team-based work. This sample was older, averaging 38 years, and all members of their team were contacted to complete the measures of popularity and liking (as opposed to

only two in the first study). Popularity was still positively associated with liking and with receiving OCBs from coworkers, though slightly weaker than the first study. Popularity was not significantly related to receiving CWBs. It is unclear if the differences between the first and second study are due to differences in work status (full- vs. part-time), age, or organizational structure (necessity of teamwork). Additionally, only the behaviors directed towards individuals and not the behavioral correlates of popularity were identified.

While relatively little is known currently, about popularity in early adulthood, Cillessen's (2011) theory of popularity suggests there are four factors that contribute to the emergence of popularity, and these may be especially relevant to the current study. These factors include social attention-holding power (i.e., the ability to garner attention from peers), motivation, behavioral skills (e.g., physical and relational aggression, prosocial behaviors, leadership, and bossiness), and the psychobiological factor of stress resistance. In the current study, it is expected that behavioral skills and attention-holding power (visibility) will be of significance.

Gender Differences

There are several areas in which prior research suggests gender differences might appear. Particularly, studies on children and adolescents have found a greater association between physical aggression and popularity for males than for females (Sandstrom & Cillessen, 2006). Research also suggests that male adolescents whose drinking frequencies most closely match the mean of the peer group enjoy higher peer status, while females who drink infrequently are seen as higher in popularity (Balsa et al., 2011).

Research on college-aged samples yielded some interesting gender differences (Lansu & Cillessen, 2012), such that men were both more likely to be nominated as central and powerful, but also seen as not fitting in and victims; and social acceptance and popularity had a stronger relationship for men than for women (also consistent with findings on adolescents). However, it should be noted that there were a low number of male participants in this study, which may have influenced nominations.

Summary

Popularity and peer status in adolescence has been linked to both positive and negative behavioral and psychological outcomes, however, very little is known about how this construct presents in early adulthood. As emerging adulthood is typically represented by big changes, in peer structure and educational setting, it is important to understand the ways in which individuals adjust. One form of adjustment concerns how one fits into the peer hierarchy. Research on adolescents indicates that both individuals who are high (Troop-Gordon, Visconti, & Kuntz, 2010) and low (Parker & Asher, 1987)) on status present risk factors (e.g., aggression) for poor academic performance and school avoidance. To understand more about how popularity in emerging adulthood impacts college adjustment, there must first be a deeper understanding of what it means to be popular for this age group.

The current study seeks to use self-reports of popularity to gain a better understanding of the associations of popularity in a *typical* university setting. These correlates include aggression, prosociality, social dominance orientation, risky health behaviors, social acceptance, and visibility, which have all been previously studied in the adolescent literature. They are also all relevant to the college setting in various

ways. For instance, research from Lansu and Cillessen (2012) in a small college setting suggests popular individuals at this age may still be relying on relational aggression to manipulate the peer system. Additionally, having values consistent with social dominance orientation may play a key role in getting ahead during the major transition into college. Further research shows that several risky health behaviors peak during emerging adulthood, including substance use and unprotected sex (Arnett, 1992; Bachman, Johnston, O'Malley, & Schulenberg, 1996).

This study also seeks to understand how emerging adults conceptualize popularity. How do they characterize popular and unpopular females and males? Are their perceptions positive or negative? Knowing whether individuals could be at risk for social issues based on their peer status could help inform more targeted programming for college students. Additionally, knowing how popular emerging adults are perceived could help researchers determine other aspects of popularity that may not be apparent from prior research on adolescents. The following research questions will be addressed in this project.

Research Questions and Hypotheses

1) How is popularity conceptualized in emerging adulthood? Very few studies have sought to understand this construct in emerging adulthood, and to my knowledge, no one has used a prototype method with this age group. This research goal serves the purpose of better understanding what it is that individuals in this population identify as key correlates of popularity and unpopularity when asked to describe their peers in these terms. It was hypothesized that popular students would be identified as being more attractive,

dominant, athletic and/or involved in activities, and socially connected (as identified by peer interactions) than unpopular students. Popularity's association with attractiveness has been well-documented in the adolescent literature (e.g., Lease, Musgrove, & Axelrod, 2002) and it was suspected that this relationship would remain in emerging adulthood, as this is an important time for exploring romantic and sexual experiences (Arnett, 2000). Dominance is often associated with popularity in adolescence (e.g., Adler & Adler, 1998) and would likely carry over into emerging adulthood as a key aspect of the construct, visibility, or being noticed by peers, would greatly contribute to standing out amongst a peer group of thousands. Playing on a sports team or being involved in activities, such as a sorority or fraternity, might contribute to students' visibility on campus and might be a way in which popular students are identified. Finally, popularity is often related to peer interactions in the adolescent literature (LaFontana & Cillessen, 2002). This would likely remain true for emerging adulthood, as it would only serve as reinforcement for the visibility factor, but also because creating social connections could help ease the transition (Kurita, 2000).

2) What is the intercorrelation of popularity and social acceptance in emerging adulthood? It was hypothesized that, consistent with prior research, there might be a moderate correlation, but that these would still be two distinct constructs (e.g., Parkhurst & Hopmeyer, 1998; Lansu & Cillessen, 2012).
3) What are the associations of prosocial behavior, social dominance orientation, substance use, and physical and relational aggression with self-reported

popularity in emerging adulthood? It was hypothesized that individuals who self-reported as being lower on popularity would likely be lower on prosocial behavior, as researchers have linked exclusion to decreased prosociality (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). Further, it was suspected that there would be a positive association between social dominance orientation and popularity, consistent with prior research on adults, which found a significant, moderate correlation between self-reports of high perceived status and social dominance orientation (Alba, McIlwain, Wheeler, & Jones, 2014). It was hypothesized that individuals who self-reported as being popular would be higher on peer relational aggression. This association has been found in many studies on children and adolescents (e.g., Cillessen & Mayeux, 2004), as well as in Lansu & Cillessen's (2012) study on emerging adulthood. Further, popular males would likely be higher on peer physical aggression than unpopular males, as these behaviors are typically more impactful for males than females (Sandstrom & Cillessen, 2006). Finally, it was hypothesized that popularity would be positively associated with more frequent substance use, which has been found in adolescent and adult literature (e.g., Mayeux, Sandstrom, & Cillessen, 2003; Phua, 2011), and would likely continue to be a factor due to the increased access to substances individuals may have previously been to young to purchase on their own

4) Are there any gender differences in how behaviors predict popularity? It was hypothesized that physical aggression would be associated with popularity for males but not females. Research on adolescent boys has associated use of

physical aggression with reestablishing dominance hierarchies (Pellegrini & Bartini, 2001). It was also hypothesized that, consistent with prior research, substance use would be more strongly associated with popular males than popular females (Balsa et al., 2011).

Method: Study 1

Participants

Participants were 254 college undergraduates (73.2% female) recruited from a university in the Midwest. Participants ranged in age from 17 to 23 years (M = 18.91 years, SD = 1.15 years). The sample was 78.3% White, 6.7% Asian or Pacific Islander, 3.1% Native American, 4.3% African American, 3.9% Hispanic, and 2.4% other ethnic groups.

Procedure

After informed consent was obtained, measures were administered to participants in the lab. Measures included a battery of surveys assessing self-reported peer status, aggression, risky health behaviors, social dominance orientation, and life satisfaction. Some participants also completed qualitative measures of their perceptions of what makes peers popular in college. Completion of measures took approximately 30 minutes. Participants were compensated with credit towards psychology courses.

Measures

Peer status

Participants completed a six-item self-report survey of their peer status amongst others on their campus. Items assessed perceptions of how popular students felt they were [“How popular are you among the other students on your campus (classes, dorm or

apartment complex)?"; six-point Likert scale from 1, very unpopular, to 6, very popular], how much they are noticed by peers ["How much do you think the other students on your campus (classes, dorm or apartment complex) notice you or pay attention to you?"; six-point Likert scale from 1, not at all, to 6, very much], how well liked they are (two items; e.g., "How much do you think the other students on your campus like you?"; six-point Likert scale from 1, not at all, to 6, very much), importance of peer status ("How important is it to you what social position you have among your peers?"; seven-point Likert scale from 1, not at all, to 7, extremely), and if they hang out with popular peers ("Do you hang around with other people who are popular?"; seven-point Likert scale from 1, never, to 7, always).

Aggression

Participants completed subscales of a self-report measure of aggression and victimization (Morales & Crick, 1998) assessing peer relational aggression (11 items; e.g., "I have intentionally ignored a person until they gave me my way about something"; $\alpha = .78$), peer physical aggression (six items; e.g., "I try to get my own way by physically intimidating others"; $\alpha = .79$), and prosocial behavior (11 items; e.g., "I am usually willing to help out others"; $\alpha = .78$). Participants rated how true each statement was for them on a seven-point Likert scale, where 1 is "Not at All True" and 7 is "Very True." For a full list of items, see Appendix A.

Risky Health Behaviors

Participants completed 24 items from the Center for Disease Control's National Youth Risk Behavior Survey (2017) assessing smoking, alcohol use, drug use, and sexual behaviors. Three of the four items assessing alcohol use were combined into one

subscale after correlational analyses indicated that indicators for alcohol use were the only risky health behaviors with significant associations with peer status (α = .88). Items include, "During your life, on how many days have you had at least one drink of alcohol," "During the past 30 days, on how many days did you have at least one drink of alcohol," and "During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?"

Social Dominance Orientation

Participants completed a 16-item scale assessing their social dominance orientation (Pratto et al., 1994; α = .87). Participants indicated how positively or negatively they felt about a series of statements on a seven-point Likert scale, where 1 is *Extremely Negative* and 7 is *Extremely Positive*. Example items include, "Group equality should be our ideal" and "It's OK if some groups have more of a chance in life than others." See Appendix B for full scale.

Results: Study 1

Preliminary Analyses

Means and standard deviations for the aggression subscales, prosocial behavior, alcohol use, social dominance orientation, and self-reports of popularity, visibility, social acceptance, importance of social position, and time spent with popular peers are presented for males, females, and the overall sample in Table 1. A one-way ANOVA was used to test for significant gender differences. Males scored higher on social dominance orientation, F (1, 252) = 10.30, p = .002, placed more importance on social position, F (1, 250) = 5.00, p = .026, were more physically aggressive towards peers, F (1, 248) = 14.39, p < .001, and consumed alcohol more often, F (1, 250) = 9.20, p =

.003, than females. Females self-reported greater prosociality, F (1, 240) = 17.36, p < .001, than males.

Correlations Among Popularity, Social Acceptance, Visibility, Aggression, Prosocial Behaviors, Risky Health Behaviors, and Social Dominance Orientation

Intercorrelations of all study variables were calculated for the overall group (see Table 2) and separately by gender (see Table 3). Overall, self-reported popularity was significantly, positively correlated with social acceptance, $r(254) = .70$, $p < .001$, visibility, $r(254) = .75$, $p < .001$, importance of social position, $r(252) = .39$, $p < .001$, hanging with popular peers, $r(254) = .55$, $p < .001$, prosociality, $r(242) = .17$, $p = .01$, and alcohol use, $r(252) = .22$, $p < .001$.

For females, self-reported popularity was significantly correlated with social acceptance, $r(186) = .69$, $p < .001$, visibility, $r(186) = .74$, $p < .001$, importance of social position, $r(185) = .41$, $p < .001$, hanging with popular peers, $r(186) = .52$, $p < .001$, prosociality, $r(177) = .18$, $p = .016$, and alcohol use, $r(184) = .18$, $p = .015$.

For males, self-reported popularity was significantly correlated with social acceptance, $r(68) = .74$, $p < .001$, visibility, $r(68) = .77$, $p < .001$, importance of social position, $r(67) = .34$, $p = .004$, hanging with popular peers, $r(68) = .60$, $p < .001$, and alcohol use, $r(68) = .28$, $p = .021$.

Testing for Moderation

Consistent with early research on popularity in child and adolescent samples, interactions of gender and all study variables were used to predict popularity. Steps are highlighted in Table 4. The table includes standardized betas and t values of predictor variables, and R^2 and change in R^2. Independent variables were centered on the means

prior to analyses. The model was specified in the following manner: At Step 1, gender, relational aggression, physical aggression, social acceptance, visibility, social dominance orientation, prosociality, and alcohol use were entered as predictors. At Step 2, the interactions of gender and relational aggression, gender and physical aggression, gender and social acceptance, gender and visibility, gender and social dominance orientation, gender and prosociality, and gender and alcohol use were entered.

There were main effects of social acceptance, $\beta = .36$, $t(219) = 6.87$, $p < .001$, and visibility, $\beta = .49$, $t(219) = 9.45$, $p < .001$, and alcohol use, $\beta = .12$, $t(219) = 2.79$, $p = .006$. There were no significant two-way interactions.

Discussion of Study 1

Findings from Study 1 answer several key questions about popularity in emerging adulthood. Particularly, popularity and social acceptance have an atypically strong positive relationship, where most prior research finds these things to be only moderately correlated, which may point towards a greater desire to be *liked* in college as opposed to just being popular. The results also indicate that popularity has a significant and strong, positive relationship with visibility, and weak, but significant relationships with prosociality and alcohol use. Prior literature has also connected these constructs, so these findings are not surprising. Though, there were expectactions that popularity would maintain its associations with measures of aggression and social dominance orientation, which was not the case. Perhaps this is a manifestation of the idea that emerging adults are acting in such ways as to be accepted by peers. The aggressive tactics that are typically used in adolescence to manipulate the peer group would be ineffective in achieving this goal. Further, individuals who are higher on

social dominance orientation may be engaging in these more antisocial behaviors in an attempt to establish a dominance hierarchy, which appear to be unsuccessful for this population.

It should be noted, however, that these findings may also be an artifact of self-reporting peer status. Peer nominations are often considered the gold standard for popularity research, but they are not feasible with such a large reference group. Study 2 looks to support the results of the first study by integrating a mixed-methods framework and collecting open-ended responses assessing what makes peers popular or unpopular in college. Additionally, the second study serves the purpose of identifying any additional factors of popularity in emerging adulthood that may not be immediately evident based on the previous literature on popularity. The social context has changed from high school to college, which may reveal different conceptualizations of what it means to be popular.

Methods: Study 2

Participants

Participants were 219 college undergraduates (70.8% female) completed qualitative questions assessing perceptions of popular peers. Participants ranged in age from 18 to 25 years (M = 19.58 years, SD = 1.53 years). The sample was 76.7% White, 6.8% Asian or Pacific Islander, 5.5% Native American, 4.6% African American, 3.7% Hispanic, and 2.8% other ethnic groups.

Procedure

After informed consent was obtained, surveys were administered to participants in the lab. Surveys included qualitative measures of participants' perceptions of what

makes peers popular in college. Completion of measures took approximately 45 minutes to complete. Participants were compensated with credit towards psychology courses.

Measures

Perceptions of Popularity

Participants were asked four open-ended questions about what made peers popular or unpopular in college. Items included the following: "Think about the girls on campus (in your dorm, apartment complex, or classes) who are popular. In general, what is it about girls like this that make them popular with other people?"; "Now think about the girls on campus (in your dorm, apartment complex, or classes) who are unpopular. In general, what is it about girls like this that make them unpopular with other people?"; "Now think about the guys on campus (in your dorm, apartment complex, or classes) who are popular. In general, what is it about guys like this that make them popular with other people?"; and "Now think about the guys on campus (in your dorm, apartment complex, or classes) who are unpopular. In general, what is it about guys like this that make them unpopular with other people?"

Coding of and Analytic Approach to Responses to Open-Ended Questions

Most participants gave more than one response to the open-ended questions. Three coders, one graduate student and two undergraduate students, divided responses into separate answers, yielding 2,301 separate responses. The coders rated each answer for valence on a nine-point scale, from -4, *most negative* to +4, *most positive*. A single valence rating was created for each answer by averaging coders' scores. Interrater reliability based on 99.9% of cases was .96 (Cronbach's alpha). Coders then separated responses into one of 40 categories identified based on prior research with adolescents

(LaFontana & Cillessen, 2002) and an examination of a subset of answers from the current study. When possible, coders used the parent category, but if the response was more specific, (e.g., level of attractiveness), subcategories were used. Cohen's κ was .60, .58, and .63 ($p < .001$) for each set of coders across the 40 categories. Differences between coders were then discussed and final categories were determined through mutual agreement.

The 40 categories were then combined into 12 main categories by collapsing subcategories into their parent category. The final categories were physical appearance, material wealth, peer interactions, risk-taking behavior, athletic ability (only used to describe popular and unpopular males), academic performance, competencies/incompetencies, deviance, prosocial behavior, dominance, involvement in activities other than sports, and antisocial behavior (see subcategories and sample descriptions in Table 5). The remaining categories were not used because they were uncodable, unused, or too ambiguous (see Appendix D for full list).

The previously created valence ratings for participants' responses were then summed for each content category for both popular and unpopular targets. For instance, if a participant gave two descriptions of an unpopular girl that mentioned aggression, which were rated by coders as -3 and -2, respectively, the ratings were added resulting in a score of -5 for that category. Further, neutral valence scores of '0' were used for categories in which participants did not comment at all, indicating that they did not see that category as being a positively or negatively valenced feature of popular or unpopular peers. For example, if a participant does not mention alcohol use for popular girls, it reflects that they do not associate alcohol use with popularity, so they do not

comment positively or negatively. As a result, each participant had 46 scores, one for each of the 11 categories describing each of the target genders for each of the popularity statuses (44 total). Participants had an additional two scores describing athletic abilities of popular and unpopular males. Ultimately, the following analyses reflect how often the categories are mentioned for the respective targets, as well as how positive or negative the descriptions were.

Results: Study 2

Conceptualization of Popularity in Emerging Adulthood

Percentages for use of content categories for popular and unpopular males and females are presented in Table 6. Popular females were described most frequently in terms of their peer interactions, physical appearance, involvement in activities, prosocial behavior, and competencies. Popular males were described most frequently in terms of their peer interactions, physical appearance, involvement in activities, and competencies. Unpopular females were described most frequently in terms of their peer interactions and physical appearance. Unpopular males were described most frequently in terms of their peer interactions and competencies.

Means and standard deviations from valence scores are shown in Table 7. Both popular females and males were described most positively for their physical appearance, peer interactions, competencies, and prosocial behavior. Popular females were also described quite positively in terms of involvement in activities other than sports. Unpopular females were described most negatively for their physical appearance and peer interactions, while unpopular males were described most negatively for their

peer interactions and competencies. Figures 1 and 2 graphically represent category means for popular and unpopular females and males.

To examine the effects of gender on perceptions of popularity, a 2 (target popularity) X 2 (target gender) X 2 (respondent gender) ANOVA on each of the content categories was performed, with target popularity and target gender treated as repeated measures factors. Athletic ability was only mentioned for popular and unpopular males, which did not allow for a three-way interaction to be tested, so only a 2 (target popularity) X 2 (respondent gender) ANOVA was performed. The *p*-value was adjusted to .008 for each effect to satisfy the Bonferroni correction (Huberty & Morris, 1989).

Effects of Target Popularity

Popular females significantly differed from unpopular females in terms of physical appearance, $F(1, 218) = 74.421$, $p < .001$, material wealth, $F(1, 218) = 26.789$, $p < .001$, peer interactions, $F(1, 218) = 220.441$, $p < .001$, academic performance, $F(1, 218) = 10.137$, $p = .002$, competencies, $F(1, 218) = 44.389$, $p < .001$, deviance, $F(1, 218) = 8.477$, $p = .004$, prosocial behaviors, $F(1, 218) = 59.244$, $p < .001$, dominance, $F(1, 218) = 14.300$, $p < .001$, and activity involvement, $F(1, 218) = 64.284$, $p < .001$. For all areas, unpopular females were seen more negatively than popular females.

Popular males differed significantly from unpopular males in terms of physical appearance, $F(1, 218) = 61.624$, $p < .001$, material wealth, $F(1, 218) = 19.938$, $p < .001$, peer interactions, $F(1, 218) = 185.391$, $p < .001$, academic performance, $F(1, 218) = 8.923$, $p = .003$, competencies, $F(1, 218) = 86.399$, $p < .001$, deviance, $F(1, 218) = 23.667$, $p < .001$, prosocial behaviors, $F(1, 218) = 49.905$, $p < .001$, activity involvement, $F(1, 218) = 70.932$, $p < .001$, antisocial behavior, $F(1, 218) = 10.220$, $p =$

.002, and athleticism, $F(1, 218) = 29.815$, $p < .001$. For all areas, unpopular males were perceived more negatively than popular males.

Effects of Gender

There was only one significant three-way interaction, which occurred between target popularity, target gender, and respondent gender, $F(1, 216) = 17.333$, $p < .001$, partial $\eta 2 = .074$, for physical appearance (see Figure 3). This interaction was explained by a statistically significant simple two-way interaction between popularity and target gender for males, $F(1, 62) = 21.628$, $p < .001$, partial $\eta 2 = .259$, but not for females $F(1, 154) = .261$, $p = .610$, partial $\eta 2 = .002$. When the respondents were male, there was a stronger, positive association between popularity and appearance when the targets were female than when the targets were male.

There was also a significant two-way interaction between popularity and target gender for competencies (see Figure 4), $F(1, 218) = 22.304$, $p < .001$, partial $\eta 2 = .093$, such that there was a stronger positive association between popularity and competencies for males than for females. Finally, there was a significant two-way interaction between popularity and respondent gender for prosocial behaviors (see Figure 5), $F(1, 216) = 11.922$, $p = .001$, partial $\eta 2 = .052$, such that female respondents perceived stronger positive associations between popularity and prosocial behavior (for both female and male targets) than male respondents.

Discussion

The current study investigated self-reports of popularity and the behavioral correlates associated with peer status in an undergraduate population. Additionally, this study sought to better understand how popularity is perceived in emerging adulthood.

Understanding popularity specifically is of great importance for several reasons. Popular individuals are generally good examples of sufficient social skills, popular students may bring about or continue a cycle of rejection of their peers, popular individuals are at risk of engaging in deviant behaviors or activities that may affect their health, and the risks for popular youth may spread to those that are easily influenced by them (Cillessen, 2011).

The first research question sought to determine how popularity is conceptualized in emerging adulthood. There appears to be 12 main categories that college students reference when describing popular and unpopular peers: physical appearance, material wealth, peer interactions, risk-taking behavior, academic performance, competencies, deviance, prosocial behavior, dominance, involvement in activities other than sports, antisocial behavior, and athleticism. Frequency analyses reveal that the most commonly referenced category when describing popularity is peer interactions, suggesting that popularity is largely a function of social connectedness. This is consistent with research on adolescents (LaFontana & Cillessen, 2002). Other frequently referenced categories include physical appearance, competencies, prosociality, and involvement in activities other than sports. Prior studies have noted popularity's associations with attractiveness, competencies (e.g., sense of humor), and prosociality (de Bruyn & Cillessen, 2006; Vaillancourt & Hymel, 2006). Involvement in activities other than sports as a category of note may be related to the increased role of sororities, fraternities, and interest groups in the way in which college students connect socially.

My hypothesis that popular students will be identified as being more attractive, dominant, athletic and/or involved in activities, and socially connected than unpopular

students was partially supported. Popular females were perceived significantly more positively in terms of their physical appearance, dominance, involvement in activities other than sports, and peer interactions than unpopular females. Additionally, unpopular females were seen significantly more negatively than popular females in terms of their wealth, academic performance, competencies, deviance, and prosocial behavior. Popular males were perceived significantly more positively than unpopular males in terms of their physical appearance, athleticism, involvement in activities other than sports, and peer interactions. Further, unpopular males were seen significantly more negatively in terms of their wealth, academic performance, competencies, deviance, prosocial behavior, and antisocial behavior. Many of these distinctions overlap with research on adolescent samples, such that popular peers are seen as more attractive, socially connected, intelligent, competent, prosocial, dominant, and athletic than unpopular peers (e.g., LaFontana & Cillessen, 2002; Lease, Musgrove, & Axelrod, 2002; Vaillancourt & Hymel, 2006). Further, research indicates popular individuals are wealthier and demonstrate fewer deviant behaviors (Vaillancourt & Hymel, 2006). One area that does not seem to align with prior research are the perceptions of antisocial behavior (i.e., physical and relational aggression) used by popular and unpopular males. While there is prior research suggesting that popular peers use significantly more antisocial behaviors than unpopular peers (e.g., Mayeux et al., 2008; de Bruyn & Cillessen, 2006; Peeters, Cillessen, & Scholte, 2010), the current study suggests that perceptions of unpopular males' antisocial behaviors are significantly more negative than popular males. For this population, perhaps aggression is no longer instrumental in attaining status and, instead, leads to rejection from the peer group.

The second research question sought to understand the intercorrelation of popularity and social acceptance in emerging adulthood. My hypothesis that these two constructs would be only moderately correlated, as has been found in previous research, was not supported. It appears that there is actually a strong, positive association between popularity and social acceptance in emerging adulthood. While this is not consistent with Lansu and Cillessen's (2012) findings, or research with younger populations, this may be because of the differing make-up of the social setting used in their study, as well as the differing peer status measures. Though Lansu and Cillessen used sociometric measures in a professional college in which students spend most of their time in classrooms with the same peer group, the current study used self-reports at a university with a much less structured social composition. It is unclear whether the difference lies in skewed subjective experiences of popularity and acceptance, or if the larger, looser social structure strengthens the relationship between these constructs. Future research would need to work to better parse this connection.

The third research question sought to understand more about the associations of prosocial behavior, social dominance orientation, physical aggression, and relational aggression with self-reported popularity in emerging adulthood. My hypothesis that individuals who self-report as being higher on popularity will be higher on relational aggression was not supported. Despite prior research finding significant correlations between these constructs (e.g., Cillessen & Mayeux, 2004), they were not related in the current study. This might help to explain the stronger association between popularity and acceptance found. Perhaps the lowered use of relational aggression in college leads to greater liking by peers. My hypothesis that popular males will be higher on peer

physical aggression than unpopular males was not supported. While research on adolescents suggests that popular males may engage in more physical aggression (e.g., Andreou, 2006), this does not seem to be the case with emerging adulthood. This could be because college students view physical aggression by males as more aggressive and less acceptable than physical aggression by females (Basow, Cahill, Phelan, Longshore, & McGillicuddy-DeLisi, 2007), thus making the use of these behaviors much more socially risky in a university setting. Consistent with these results, social dominance orientation was not significantly related to popularity. Prior research has linked social dominance orientation to the use of aggression by popular peers, however that is not the case for the current sample.

My hypothesis that unpopular individuals will report lower prosocial behavior than popular peers was supported. For the overall group, there was a significant, positive correlation between popularity and prosocial behaviors, which suggests that individuals lower on popularity would also be lower on prosociality. This could be because their rejection from, or lack of being noticed by, the group leads to fewer helping behaviors, or it could be the opposite. My hypothesis that popularity will be positively associated with more frequent substance use was only partially supported. While it was significantly, positively correlated to frequency of alcohol use, there were no associations with frequency of smoking cigarettes or using other illicit substances.

The fourth research question sought to investigate any gender differences. There were no significant gender differences in the associations between self-reported popularity and any of the behavioral measures. However, there were several differences when considering perceptions of popular and unpopular peers. Specifically, males

perceived appearance as having a much stronger, positive relationship with popularity for females than for males. Whether this is because male respondents genuinely did view appearance as a more central determinant of popularity for females or because they were reluctant to describe males in terms of their attractiveness, is undetermined. Other gender differences included a perception that competencies were more strongly, positively related to popularity for males than for females and that female respondents associated popularity with prosocial behaviors more strongly than male respondents. A good sense of humor, which would be characterized under competencies in this study, has been found to be positively related to popularity for boys in younger populations (Vaillancourt & Hymel, 2006). Further, researchers have found females to be generally more prosocial than males in emerging adulthood (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). As a result of females' greater tendency towards helping behaviors, they may perceive this as an important quality of popular individuals, thus resulting in more frequent descriptions.

Taken together, the results of the quantitative and qualitative analyses of popularity in emerging adulthood suggests college represents a time when prosociality takes a greater role in determining peer status, as opposed to adolescence, when both antisocial and prosocial methods are used to manipulate the peer group (Sandstrom & Cillessen, 2006). Popular individuals in college are highly liked, visible, and socially well-connected. It appears that peer relationship goals may be changing from adolescence in that adolescents value being popular, whereas emerging adults value being accepted. This can be seen by looking at both self-reported popularity and open response conceptualizations of popular peers, which both find significant, positive

associations between popularity and social acceptance (as measured by peer interactions in the second study), and popularity and prosocial behavior. Further, both studies suggest that popular peers are not using antisocial (aggressive) behaviors more than their peers. Visibility arose as a factor of popularity in both studies (assessed with dominance in Study 2) for females, but not males, which may be because other factors were identified as being more important for males, such as athleticism.

Just as we must bear in mind that because popular children and adolescents are, "by definition, highly visible, central, and socially influential, their reliance on aggressive and disruptive strategies may serve as a vivid model for lower status children" (Sandstrom & Cillessen, 2006, p. 313), we must also consider the impact of popularity in emerging adulthood. However, the current study presents a much more optimistic outlook. Apart from alcohol use, popular college students appear to engage in much more positive behaviors (or at least less antisocial) than popular children and adolescents. Perhaps "getting ahead" in emerging adulthood is achieved in much more constructive ways. The aggression that was instrumental in manipulating the peer group in high school may not be as effective when the reference group includes thousands of peers. Or perhaps, the students who used aggression to control the peer group in high school did not go on to attend college. Research on adolescents has found that aggressive youths' grades decreased and absences increased as their popularity increased (Schwartz, Gorman, Nakamoto, & McKay, 2006). Poor academic performance in high school may have prevented admission to college.

As with all research, there were some potential weaknesses to this study. Investigating peer status in large university settings is difficult, as students are unlikely

to know most of their thousands of classmates. For this reason, the current study used self-reports of popularity and social acceptance. However, this method may be plagued by false perceptions of one's own status. Future studies may benefit from using multiple informants. For example, using sociometric nomination measures within a smaller group (e.g., fraternity, sorority, interest group), as well as self-reports of popularity within the group and outside of the group. This would allow researchers to see the correlations between peer- and self-reports of popularity in emerging adulthood, but also determine how individuals view their popularity in different settings. Further, future research could examine the associations between self-reported high school popularity and college popularity to better understand how this construct evolves over time. Both high- and low-status high schoolers have the potential for negative outcomes later in life (e.g., Allen, Schad, Oudekerk, & Chango, 2014; Sandstrom & Cillessen, 2010). Knowing more about the path that leads there could better inform potential opportunities for intervention.

Table 1. Means and Standard Deviations of Study 1 Variables.

	Overall		Female		Male	
	M	*SD*	*M*	*SD*	*M*	*SD*
1. Popularity	3.81	1.04	3.78	1.00	3.90	1.12
2. Social Acceptance	4.24	1.08	4.26	1.09	4.21	1.06
3. Social Dominance	2.94	0.95	2.83	0.93	3.25**	0.94
4. Visibility	3.50	1.16	3.45	1.16	3.63	1.15
5. Social Importance	3.87	1.55	3.74	1.46	4.22*	1.72
6. Popular Friends	4.14	1.23	4.10	1.15	4.26	1.41
7. Relational Aggression	1.98	0.93	1.94	0.95	2.08	0.85
8. Physical Aggression	1.43	0.67	1.34	0.61	1.69***	0.77
9. Prosocial Behavior	5.86	0.62	5.95	0.61	5.59***	0.59
10. Alcohol Use	2.24	1.57	2.06	1.46	2.73**	1.76

Note. Significant gender differences are indicated by *$p < .05$, **$p < .01$, ***$p \leq .001$

Table 2.Intercorrelations of Study 1 Variables for All Participants.										
Variable	1	2	3	4	5	6	7	8	9	10
1. Popularity	-									
2. Social Acceptance	0.70***	-								
3. Social Dominance	0.11	0.07	-							
4. Visibility	0.75***	0.63***	0.10	-						
5. Social Importance	0.39***	0.34***	0.35***	0.46***	-					
6. Popular Friends	0.55***	0.46***	0.30***	0.48***	0.59***	-				
7. Relational Aggression	0.00	-0.05	0.20**	0.01	0.21***	0.11	-			
8. Physical Aggression	-0.09	-0.17**	0.18**	-0.02	0.06	-0.01	0.35***	-		
9. Prosocial Behavior	0.17**	0.26***	-0.18**	0.10	-0.11	0.01	-0.23***	-0.23***	-	
10. Alcohol Use	0.22***	0.08	0.31***	0.18**	0.23***	0.33***	0.15*	0.14*	-0.16*	-

Note. *$p < .05$, **$p < .01$, ***$p \leq .001$

Table 3. Intercorrelations of Study 1 Variables by Gender.

Variable	1	2	3	4	5	6	7	8	9	10
1. Popularity	-	0.69***	0.13	0.74***	0.41***	0.52***	0.02	-0.13	0.18*	0.18*
2. Social Acceptance	0.73***	-	0.03	0.62***	0.33***	0.45***	-0.01	-0.20**	0.28***	0.01
3. Social Dominance	0.04	0.18	-	0.12	0.32***	0.25***	0.19	0.12	-0.20**	0.33***
4. Visibility	0.77***	0.67***	-0.01	-	0.46***	0.49***	0.02	-0.03	0.11	0.09
5. Social Importance	0.34**	0.39***	0.36**	0.46***	-	0.56***	0.22**	0.00	-0.02	0.15*
6. Popular Friends	0.60***	0.50***	0.40***	0.45***	0.63***	-	0.08	-0.08	0.01	0.29***
7. Relational Aggression	-0.08	-0.16	0.20	-0.02	0.17	0.17	-	0.32***	-0.25***	0.15
8. Physical Aggression	-0.05	-0.08	0.19	-0.03	0.08	0.07	0.40***	-	-0.14	0.05
9. Prosocial Behavior	0.18	0.17	0.04	0.12	-0.18	0.06	-0.11	-0.28*	-	0.26**
10. Alcohol Use	0.28*	0.28*	0.20	0.34**	0.32**	0.40***	0.14	0.19	0.01*	-

Note. Female correlations are above the diagonal and male below. *$p < .05$, **$p < .01$, ***$p \leq .001$

Table 4. Summary of Hierarchical Regression Analysis Predicting Popularity from Gender, Peer Relational Aggression, Peer Physical Aggression, Social Acceptance, Visibility, Social Dominance Orientation, and Prosocial Behavior

	β	t	R^2	ΔR^2
Step 1			.65	.65**
Gender	.00	.09		
Relational Aggression	.02	.46		
Physical Aggression	-.02	-.47		
Social Acceptance	.36	6.87**		
Visibility	.49	9.45**		
SDO	.02	.46		
Prosocial Behavior	.06	1.27		
Alcohol Use	.12	2.79*		
Step 2			.65	.01
Gender x Relational Aggression	-.01	-.16		
Gender x Physical Aggression	.05	.83		
Gender x Social Acceptance	.05	.68		
Gender x Visibility	.05	.78		
Gender x SDO	-.01	-.25		
Gender x Prosocial Behavior	.02	.36		
Gender x Alcohol Use	-.10	-1.74		

Note. *$p < .01$, **$p \leq .001$

Table 5. Subcategories and Sample Descriptions for Content Categories.

Parent Category	Subcategories	Sample Descriptions
Physical Appearance	• Attractiveness • Hygiene • Stature or physical maturity	"Pretty" "Had poor hygiene" "Skinny"
Material Wealth	• Money or status • Possessions	"Money" "Way they dress"
Peer Interactions	• Liking • High/low frequency of interaction • "Partying" • Opposite-sex interactions • Popularity	"Were liked" "Know a lot of people" "Keep to themselves" "Big party people" "More sexually active" "Association"
Risk-taking Behavior	• Drinking • Other substance use	"Drunk" "Into hardcore drugs"
Athletic Ability	--	"Athletic" "No sports"
Academic Performance	• Intelligence	"Smart/intelligence" "Bad grades"
Competencies/ Incompetencies	• Talents • Sense of humor • Socially appropriate /inappropriate behavior • Confidence	"Their own special abilities" "Easy to hang out with" "Rude" "The way they carry themselves"
Deviance	• Act different from others • Try to conform	"Outspoken" "Try too hard to fit in"
Prosocial Behavior	--	"Friendly"
Dominance	• Recognition, visibility • Power or manipulation	"Didn't stand out" "Intimidating"
Involvement in Activities (other than sports)	--	"Involved with campus activities" "In a frat house"
Antisocial Behavior	• Physical aggression • Relational aggression	"Tried to pick fights with any and everyone" "Hateful"

Table 6. Percentages for Use of Content Categories as Descriptions for Popular and Unpopular Targets.

	Popular Females	Unpopular Females	Popular Males	Unpopular Males
Physical Appearance	15.7%	10.0%	10.7%	7.9%
Material Wealth	6.9%	3.4%	5.0%	3.2%
Peer Interactions	25.6%	47.4%	24.3%	39.1%
Risk-Taking Behavior	1.4%	1.1%	2.7%	0.4%
Academic Performance	3.4%	4.9%	2.9%	6.5%
Competencies	10%	7.9%	16.5%	15.3%
Deviance	1.1%	4.7%	0.8%	7.3%
Prosocial Behavior	12.6%	2.3%	9.9%	2.8%
Dominance	2.0%	2.8%	3.5%	1.8%
Involvement in Activities	13.1%	6.8%	11.5%	6.5%
Antisocial Behavior	0.3%	3.0%	0.3%	2.8%
Athleticism	-	-	5.9%	1.4%
Total	92.1%	94.3%	94%	95%
Number of Responses	649	530	626	496

Table 7. Means and Standard Deviations of Ratings of Descriptions of Popular and Unpopular Targets.

	Females				Males			
	Popular		Unpopular		Popular		Unpopular	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1. Physical appearance	0.86	1.58	-0.54**	1.30	0.71	1.43	-0.37**	1.04
2. Material Wealth	0.26	0.82	-0.11**	0.50	0.23	0.82	-0.09**	0.45
3. Peer Interactions	1.43	2.17	-2.28**	2.41	1.46	2.18	-1.85**	2.17
4. Risk-taking behavior	-0.07	0.45	-0.09	0.62	-0.13	0.62	-0.01	0.24
5. Academic Performance	0.23	0.81	-0.01*	0.75	0.15	0.73	-0.09*	0.90
6. Competencies	0.66	1.70	-0.41**	1.49	1.19	2.32	-0.99**	2.18
7. Deviance	-0.02	0.39	-0.19*	0.80	0.01	0.26	-0.36**	1.09
8. Prosocial Behavior	1.18	2.35	-0.14**	0.71	0.80	1.66	-0.13**	0.81
9. Dominance	0.08	0.48	-0.14**	0.68	0.06	0.62	-0.05	0.47
10. Activities (Other than Sports)	0.62	1.10	-0.21**	0.66	0.48	0.88	-0.22**	0.65
11. Antisocial Behavior	-0.03	0.32	-0.22	0.91	-0.00	0.28	-0.21*	0.85
12. Athletic Ability	-	-	-	-	0.29	0.78	-0.03**	0.26

Note. Significant popularity differences are indicated by *$p < .01$, **$p < .001$

Figure 1. Descriptions of Popular and Unpopular Females.

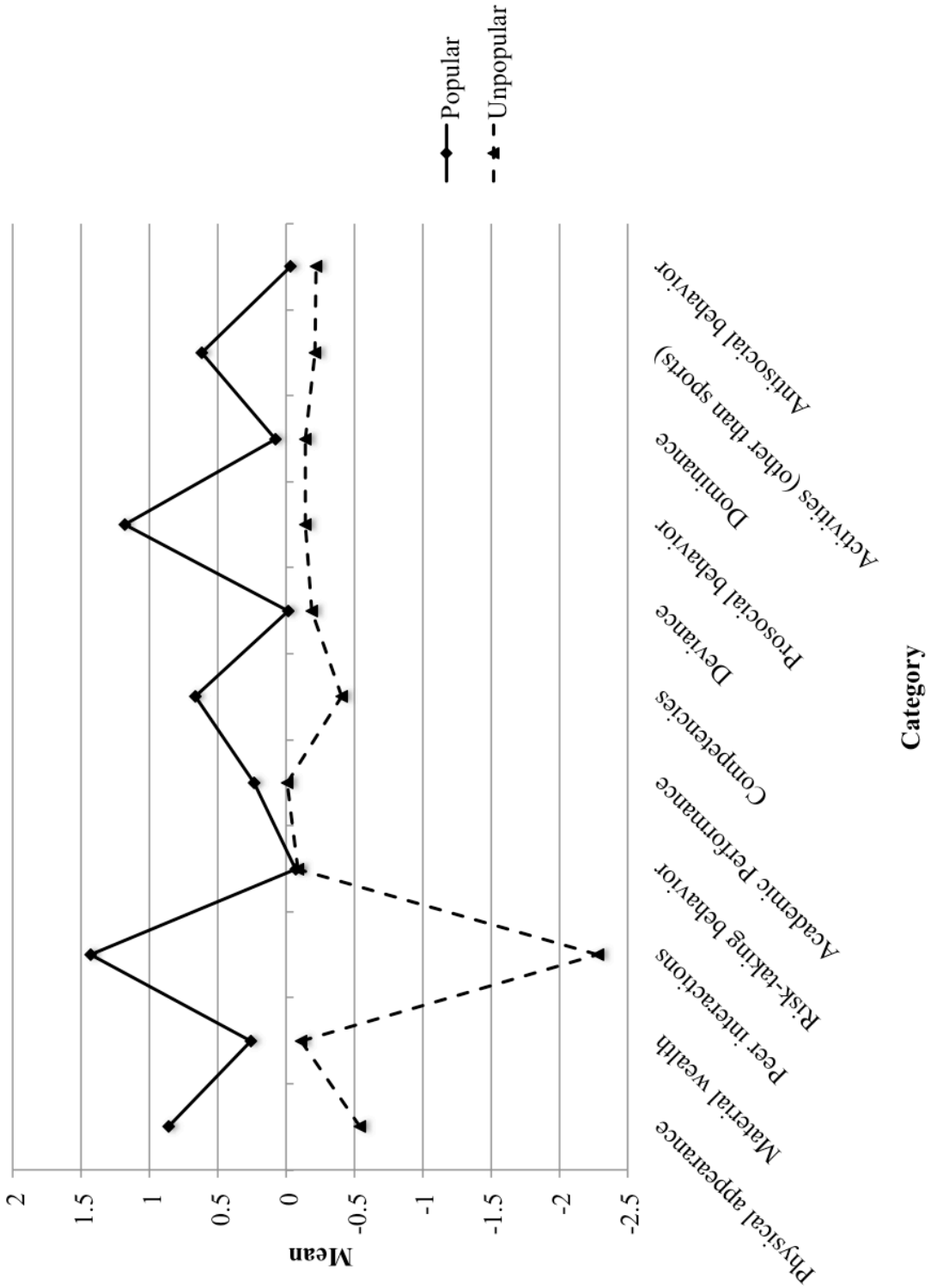


Figure 2. Descriptions of Popular and Unpopular Males

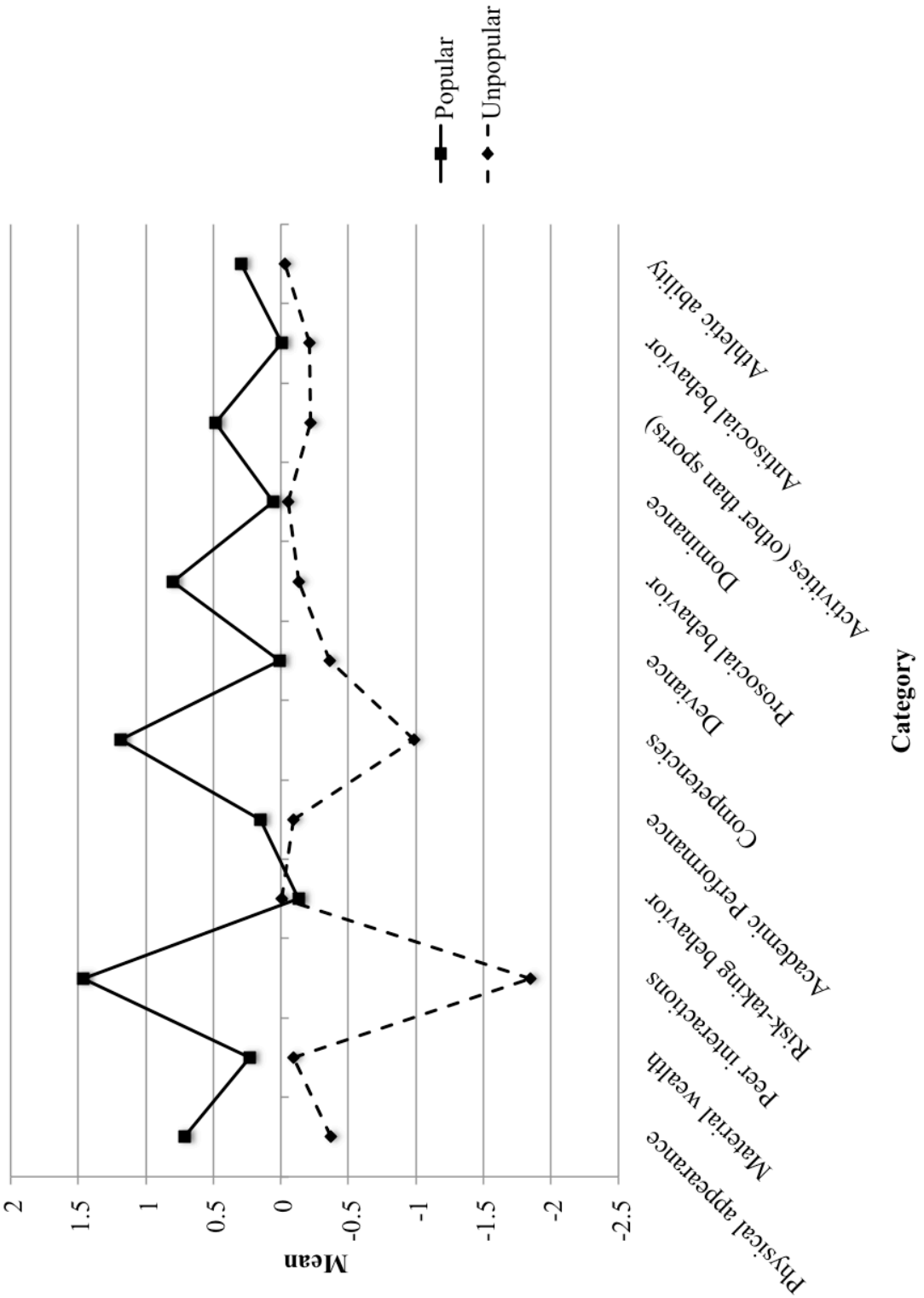


Figure 3. Three-way Interaction Between Popularity, Target Gender, and Respondent Gender for Physical Appearance.

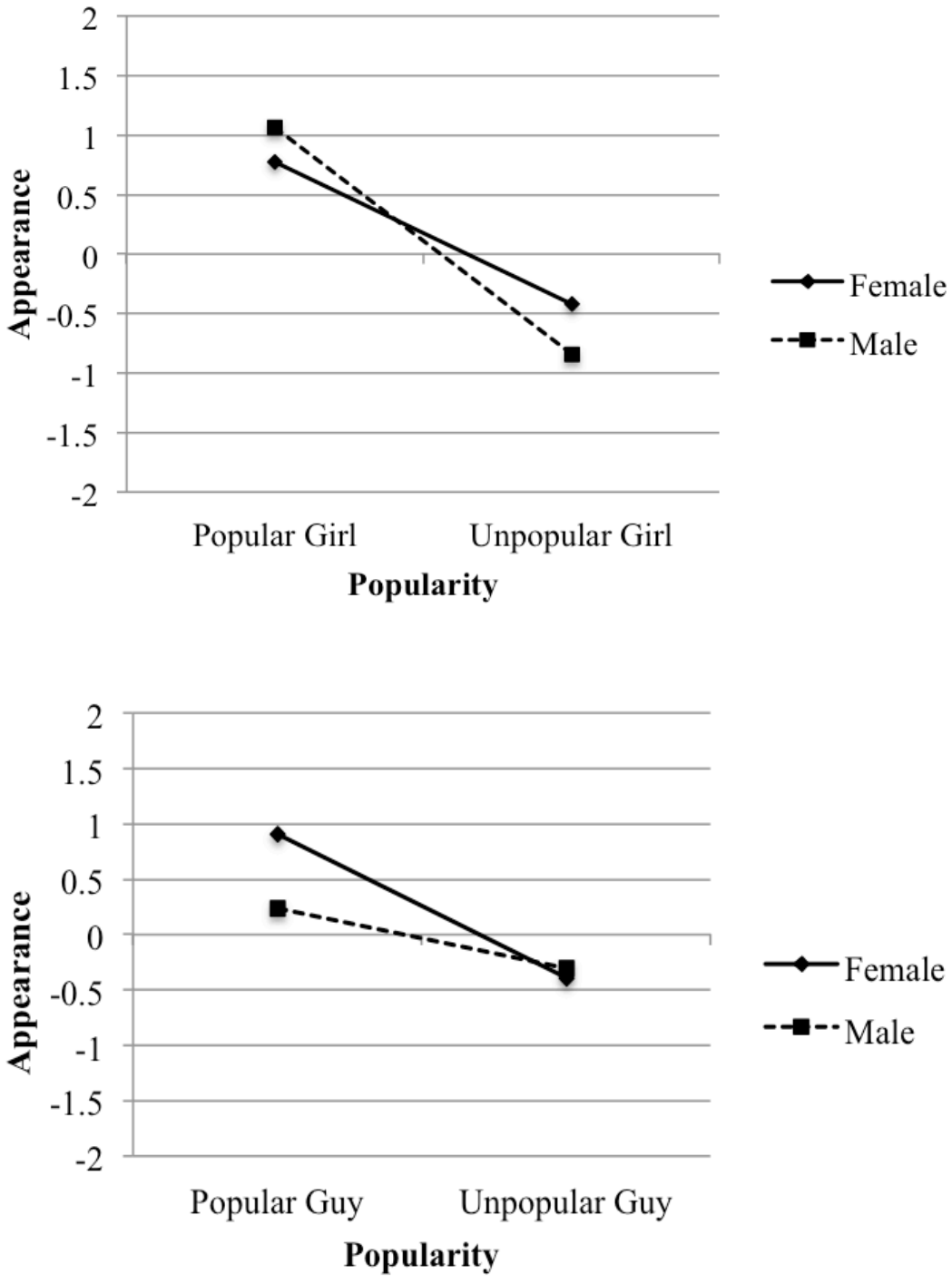


Figure 4. Two-way Interaction Between Popularity and Target Gender for Competencies.

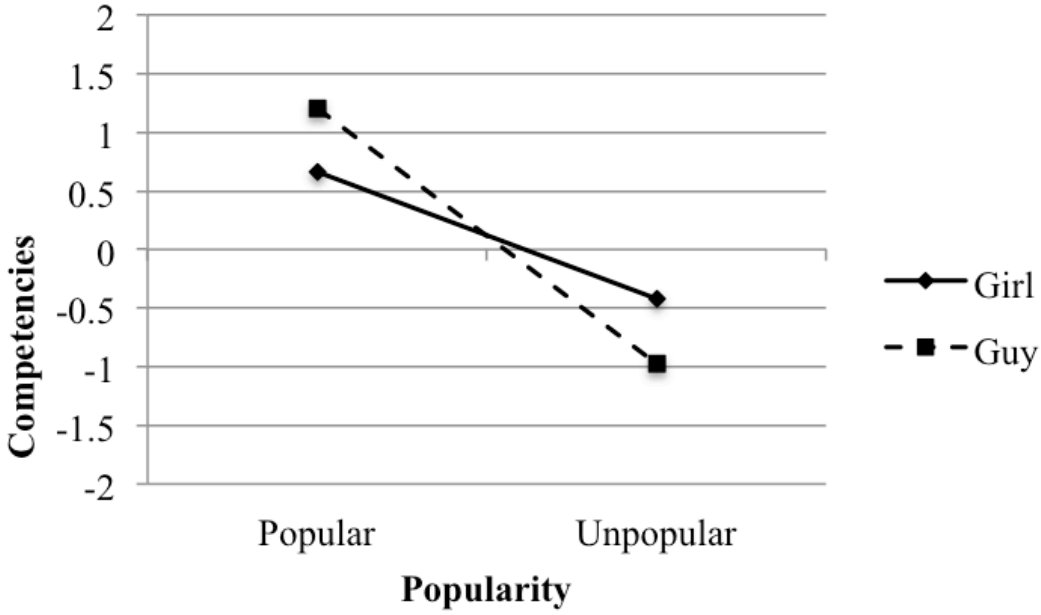
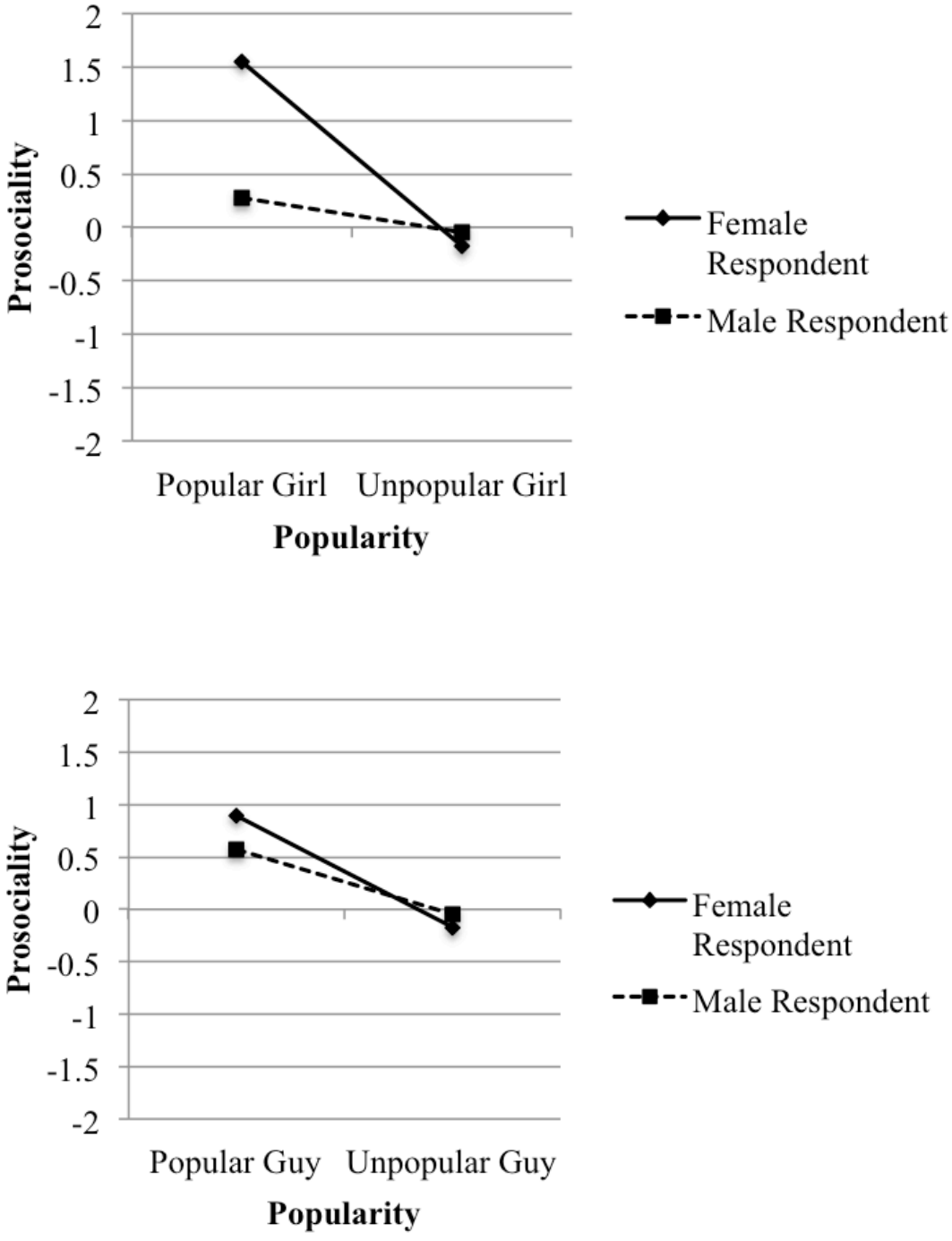


Figure 5. Two-way Interaction of Popularity and Respondent Gender for Prosocial Behavior.



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Appendix A: Relational Aggression, Physical Aggression, and Prosocial Behavior Subscales.

Relational Aggression Items:

- My friends know that I will think less of them if they do not do what I want them to do.
- When I am not invited to do something by a group of people, I will exclude those people from future activities.
- When I want something from a friend of mine, I act "cold" or indifferent toward them until I get what I want.
- When I have been angry at, or jealous of someone, I have tried to damage that person's reputation by gossiping about him/her or by passing on negative information about him/her to other people.
- When someone does something that makes me angry, I try to embarrass that person or make them look stupid in front of his/her friends.
- When I have been mad at a friend, I have flirted with his/her romantic partner.
- When I am mad at a person, I try to make sure s/he is excluded from group activities (like going to the movies or a bar).
- I have threatened to share private information about my friends with other people in order to get them to comply with my wishes.
- I have spread rumors about a person just to be mean.
- When someone hurts my feelings, I intentionally ignore them.
- I have intentionally ignored a person until they gave me my way about something.

Physical Aggression Items:

- I try to get my own way by physically intimidating others.
- When someone makes me really angry, I push or shove the person.
- When I have been provoked by something a person has said or done, I have retaliated by threatening to physically harm that person.
- When someone has angered me or provoked me in some way, I have reacted by hitting that person.
- I have threatened to physically harm other people in order to control them.
- I have pushed and shoved others around in order to get the things that I want.

Prosocial Behavior Items:

- I usually follow through with my commitments.
- I am willing to lend money to other people if they have a good reason for needing it.
- I am usually kind to other people.
- I am usually willing to help out others.
- I try to make sure that other people get invited to participate in group activities.
- I am willing to give advice to others when asked for it.
- I make an effort to include other people in my conversation.
- I make other people feel welcome.
- I am usually willing to lend my belongings (car, clothes, etc.) to other people.
- I am a good listener when someone has a problem to deal with.
- I try to help others out when they need it.

Appendix B: Social Dominance Orientation Scale

- We should strive to make incomes as equal as possible.
- Group equality should be our ideal.
- It's OK if some groups have more of a chance in life than others.
- To get ahead in life, it is sometimes necessary to step on other groups.
- We should do what we can to equalize conditions for different groups.
- It's probably a good thing that certain groups are at the top and others are at the bottom.
- Inferior groups should stay in their place.
- We would have fewer problems if groups were treated more equally.
- It would be good if groups could be equal.
- In getting what you want, it is sometimes necessary to use force against other groups.
- All groups should be given an equal chance in life.
- If certain groups stayed in their place, we would have fewer problems.
- We should strive for increased social equality.
- Sometimes other groups must be kept in their place.
- Some groups of people are simply inferior to other groups.
- No one group should dominate in society.

Appendix C: Content Categories

1. Physical appearance
    a. Attractiveness
    b. Hygiene
    c. Stature or physical maturity
2. Material wealth
    a. Money/financial security or status
    b. Possessions (cars, clothes)
3. Peer interactions
    a. Liking
    b. High frequency of interaction/sociable/extraverted
    c. Low frequency of interaction/withdrawn
    d. "Partying"
    e. Opposite-sex interactions
    f. Popularity ("hung around the popular crowd")
4. Risk-taking behavior
    a. Drinking
    b. Other substance use (marijuana, hard drugs)
5. Athletic ability
6. Academic performance
7. Intelligence
8. Competencies/incompetencies
    a. Talents
    b. Sense of humor
    c. Socially appropriate or inappropriate behavior (manners, rudeness)
    d. Confidence
9. Deviance
    a. Act different from others, stand out for negative reasons ("doesn't care what others think")
    b. Act the same as others, try to conform
10. Prosocial behavior (friendly, cooperative)
11. Dominance
    a. Recognition, visibility
    b. Power or manipulation ("nobody messes with him;" "knows how to control people")
12. Involvement in activities (other than sports)
13. Motivation to attain status
14. Antisocial behavior
    a. Physical aggression
    b. Relational aggression
15. Behavioral – not specified (last resort)
16. Personality – not specified (last resort)
17. Uncodable